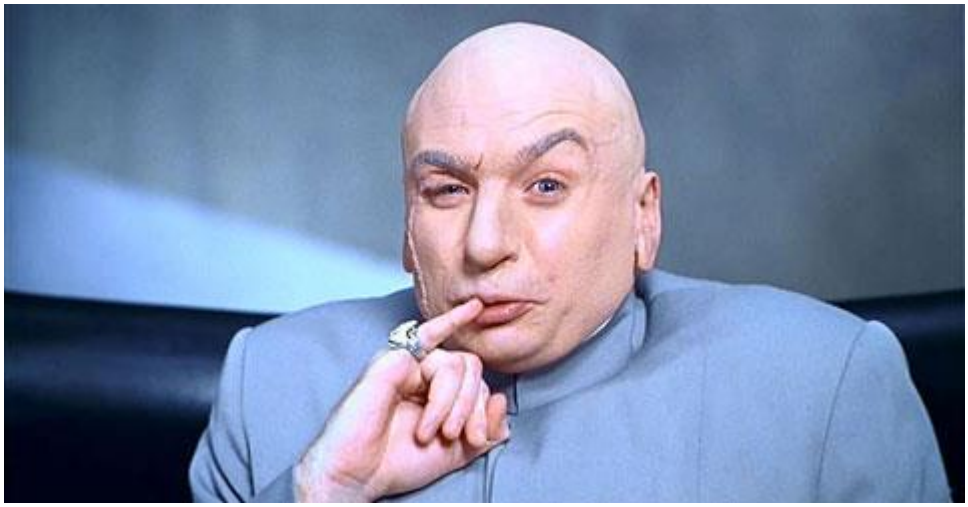

"Hello *Austin*^{Powers}. You have thwarted my quest for world domination once too often! Thanks to you and your fiendish logarithms, my e^{x}ponential rise to power has been reduced to a mere linear scale. You are now alongside the likes of Napier and Richter in Mr. Bigglesworth's and my bad books. As a consequence, I have devised this evil little task which you must complete if you ever hope to regain your mojo. For a bit of sport, I'll wager you **one million dollars** that you can't crack this devilishly clever code! When finished, you will know the answer to this question: *Who does Number Two **really** work for?*"

Match the questions and answers in each column.

1. $\log(4x-1)=2$

2. $\log_3(5-x)=3$

3. $\log_2(x+6)+\log_2 3=\log_2 30$

4. $\log_3 x+\log_3(x-1)=\log_3(4x)$

5. $\log_6(x+3)+\log_6(x-2)=1$

6. $\log_2(x+1)-\log_2(x-1)=6$

(E) $\frac{65}{63}$

(O) -22

(N) 0

(G) 5

(A) no solution

(D) $\frac{101}{4}$

(U) 4

(I) 3

(S) -1

(T) $\frac{22}{7}$

i) $1-\log(x-4)=\log(x+5)$

ii) $2^{2x}-2^{x}-6=0$

iii) $3^{2x}+2(3^{x})-15=0$

iv) $10^{2x}+5(10^{x})+4=0$

v) $\log_2 x+\log_4 x+\log_8 x+\log_{16} x=25$

vi) $5^{3x}-2(5^{2x})-5^{x}+2=0$

(W) 1

(L) 1024

(S) $\frac{\log 2}{\log 5}, 0$

(P) 5

(I) $\frac{1}{2}, 0$

(R) 4096

(D) -1

(O) $\frac{\log 3}{\log 2}$

(E) no solution

"_____" "_____".

1 2 3 4 5 6 *i) ii) iii) iv) v) vi)*